

Japanese Knotweed Management Plan Elizabeth Street, Cheetham Hill

13th June 2022
4330



Introduction

Ebsford Environmental Ltd are a consulting and contracting business specialising in the management of invasive species. We lead the way in delivering efficient, environmentally sustainable and cost-effective projects to a varied client base nationwide, with a unique service offered through a range of bespoke solutions. Our work is accredited by the two leading industry governing bodies: The Invasive Non-Native Specialist Association (INNSA) and the Property Care Association (PCA). We were the first UK company to obtain dual membership of these professional bodies that set standards and ensure projects are in line with current best practice. Our delivery of projects was recognised in 2019 when we were awarded the Contractor of the Year Award by the Property Care Association.

PROJECT SUMMARY

Client:	Kier Property
Date Prepared:	13 th June 2022
Prepared By:	Ray Holderness, Senior Consultant M: 07415 620807 E: rayholderness@ebsford.co.uk
Job Number:	4330

PROPOSED END USE:
Commercial development

TARGET COSTS:

TIMESCALES FOR ERADICATION:
Up to 3 weeks

LOCATION: Elizabeth St, Cheetham Hill

**INFESTATION WITHIN
DEVELOPMENT FOOTPRINT:**

Yes ✓ No

OPTIONS CONSIDERED:
Excavation, haulage & disposal off site
and subsequent herbicide treatment
programme



PROJECT OVERVIEW

Introduction

Ebsford Environmental Ltd were commissioned by Oliver Butler at Kier Property to undertake an invasive species walkover survey on a parcel of land earmarked for future development at Elizabeth Street, Cheetham Hill. The survey was carried out on 24 and 25th November 2021 by Ray Holderness, Senior Consultant, at Ebsford Environmental. A subsequent survey was carried out on the 2nd November 2021. At the time of surveying the site comprised of what was best described as scrubland with hardstanding covering a relatively large area of the site and dense vegetation covering most of the rest site making it difficult to survey. I submitted budget costs for our screening process and excavation, haulage and disposal off site in December 2021; I also submitted a quotation for vegetation and tree clearance. Ebsford Environmental were appointed to carry out vegetation and tree clearance and this was completed in February 2022. The site was re-assessed on completion of the clearance work and no further Knotweed was identified.

Subsequent dialogue with Oliver Butler led to the drafting of this proposal. Kier have indicated that excavation, haulage and disposal off site is their preferred eradication solution with the installation of root barrier installation and the addition of an herbicide treatment programme in areas of Knotweed that remain in situ.

There are several stands of Japanese Knotweed and numerous sporadic stands in the areas marked on the site plans shown below. There are a couple of small stands located in tarmac hard standing along the northern boundary adjacent to Elizabeth Street. A street light is located within the immediate area of the Knotweed; Ebsford would assume this would be isolated before any excavations commenced.

Further stands of Japanese Knotweed were identified along the northern boundary, behind the existing warehouse and on the western boundary where Poplar trees and a bakery are located. The Japanese Knotweed in these locations affect units 8 & 9 and a car park and turning circle. It is understood the adjacent landowner is also the vendor of the site in question and excavation of the Knotweed that extends into his site will also be removed during our works. A six metre buffer zone will be created along the northern and western boundaries where any Knotweed impinging on unit 9's footprint will be excavated to a safe distance and a specialist root barrier membrane will be installed to protect the site from lateral Knotweed regrowth from the buffer zone. It is envisaged that an herbicide treatment programme will be implemented to all areas of Knotweed on site in July or August 2022; usually within 4 to 6 weeks of the impending excavation; this will reduce the organic waste during the excavation aspect. Further herbicide applications will be made to Knotweed remaining in situ.

There are four areas of Knotweed located in the south-eastern corner that affect unit 3. The Knotweed along the eastern boundary is growing amongst a line of Poplar trees that are marked for felling. Ebsford will ensure any tree root balls that are contaminated with Knotweed rhizomes are dealt with appropriately. Several stands of Knotweed are located in the immediate area of off-site warehouse type buildings; root barrier membrane installation may also be required in this area followed by subsequent herbicide treatments over a number of years.

The objective of this document is to provide an updated document including the visible baseline location and extent of the invasive non-native species (INNS) that are listed under Schedule 9 of the Wildlife and Countryside Act. Ebsford will assess the impact, risk and barriers to the site and provide fully costed options available whilst covering the client's duty of care.

Japanese knotweed (*Fallopia japonica*) is covered under the Wildlife and Countryside Act 1981, rev. 2, meaning that it is an offence to plant or otherwise cause to grow in the wild. Japanese knotweed famously spreads laterally via its underground rhizome (root) network, as in the UK only the female plant is present, therefore growth is facilitated by vegetative spread rather than through germination. In fact, it is believed all instances in the UK are the clone of a singular female genotype.

Survey Method

Our surveyors are all Property Care Association (PCA) qualified surveyors for Japanese knotweed (JK) and have extensive experience regarding the identification of the relevant species at all times of year. This includes the three species of Japanese knotweed: *Fallopia japonica*, *Fallopia japonica x sachalinensis* & *Fallopia sachalinensis* and all other species as listed within Schedule 9 Part II of the Wildlife & Countryside Act 1981 (as amended)¹. Any material that could be considered a controlled waste under the Environmental Protection Act 1990 (as amended)².

Ebsford follow the INNSA Code of Practice which has been produced by experts within the field at the request of the Environment Agency to replace the withdrawn Code of Practice for Developers. It demonstrates the current best practice for the management of Japanese knotweed in the industry. As a regulating body within the construction industry INNSA members subscribe to the Invasive Code of Practice to improve standards within the industry and offer peace of mind to clients. This dedication to high standards and working in line with best practice is entrenched in everything Ebsford does, not simply for Japanese knotweed.

¹ Wildlife & Countryside Act 1981: The legislation aims to prevent the planting of Schedule 9 listed plant material in the wild where it then poses a threat to our native biodiversity and ecosystems. With respect to the plants section 14(2) states: if any person plants or otherwise causes to grow in the wild any plant which is included in Part II of Schedule 9, shall be guilty of an offence.

² Environmental Protection Act 1990 (as amended): Places a "Duty of Care" on the producer and anyone they employ to dispose of soil or other material contaminated with Japanese knotweed or giant knotweed. The material then becomes a controlled waste which can only be taken to licensed landfill sites and dealt with appropriately.

Japanese knotweed

The survey identified numerous areas of Japanese knotweed; all were GIS mapped across the site; the extent of all visible crowns, dead canes and visible Knotweed growth were mapped. These can be seen on the map on pages 12 of this document. A crown lies partially above and partially below the surface of the ground, connecting the upright stems to the below ground rhizome network. Each year new growth emerges from the crown and thrives throughout the growing season until it dies back for winter. When the Knotweed has died back for winter the dead stems are referred to as canes due to the brittleness and the brown appearance of the dead stems.

The appearance of the vast majority Knotweed was as expected for the time of year surveyed; growth was well established and dead canes from previous years growth was also observed within the stands of Knotweed. The stands appear to be healthy meaning no herbicides have been applied recently nor has any ground been broken in the footprint of the Knotweed areas.

A total of 1,142m² of Knotweed was mapped using GIS technology; there are a number of sporadic JK instances in the surrounding area. There is likely to be a requirement for root barrier installation in the area located adjacent to units 3, 8 & 9; an herbicide treatment programme for these areas is the most likely eradication solution.

A small amount of Horsetail and a single stand of Giant Hogweed was identified; the Horsetail is located off site and is not legislated against but is known to be a nuisance weed. Giant Hogweed is listed as a Schedule 9 plant and both the aforementioned can be dealt with at the same time as the Japanese Knotweed without impacting the costs.

Site Pictures



Picture above shows Knotweed located on the northern boundary extending off site on to the vendors land.



Knotweed located in the south western corner; the knotweed extends off site and it is likely that root barrier membrane installation is required.



Knotweed located in the south-eastern corner adjacent to large Poplar trees.

3.0 OPTION APPRAISAL

As the land is to be developed, the Japanese knotweed must be mechanically removed to allow the development to commence. Ebsford have prepared two methodologies for management, in order to allow the client to assess the most appropriate course of action, taking into consideration project programming and any site constraints. The two methodologies proposed are: Excavation, haulage & disposal off site and subsequent herbicide treatment of Knotweed remaining in situ.

3.1 Excavation, haulage & disposal off site

The client has indicated that the excavation, haulage and off-site disposal is the preferred eradication solution for the majority of Knotweed located on site and due to the results of the ground investigation reports and soil sample analysis taken by Ebsford Environmental, a multi-disciplinary approach will be required to remediate the site to facilitate the planned commercial development. Several areas contaminated with Japanese Knotweed also contain other contaminants. There will be a number of waste streams from domestic and industrial sources ranging from non-hazardous to hazardous. It is envisaged that the waste classifications will be determined on site by segregation of materials during the excavation process. Further analysis and/or waste acceptance criteria (WAC) tests may be required by the receiving landfill sites. Asbestos has been identified in a number of trial pits and asbestos quantification has been requested by the receiving landfill site. We recommend that control measures are put in place during excavations in these areas. This should include supervision by trained personnel and reassurance monitoring.

Ebsford will provide all excavation plant, haulage and disposal off site. The client will provide site security and welfare facilities.

Removal of material is always to a landfill site registered to accept such material. Ebsford will ensure all biosecurity measures are closely followed during all elements of the project, including the loading of wagons with contaminated material ready for disposal to landfill; all haulage routes will also be checked upon completion of the works. As discussed above, post-works, all documentation such as waste carriers licence and waste transfer notes can be issued to the client. Our standard post excavation procedure is to ensure the excavation is safe following our works. This involves utilising site won material from the surrounding area, to reduce the angle of repose and allow access by foot.

Prior to any works being undertaken, a full management plan is prepared, and the area of infestation is isolated to prevent access and disturbance by site traffic and operatives. We assume the site will be cleared of trees, vegetation and deleterious material before work commences.

Our trained and experienced supervisors will ensure that all visible Japanese knotweed contaminated material from within the development footprint is removed, no cross-contamination occurs, and all machinery used during the process will be clean on completion of the works. Material is always excavated under the Ebsford site manager's supervision – excavation proceeds to the extent of the rhizome network. Excavations commence from the furthest identified rhizome in 200mm layers to allow the sides and formation of each layer to be inspected by the Ebsford site manager. Our standard post excavation procedure is to ensure the excavation is safe following our works. This involves utilising site won material from the surrounding area, to reduce the angle of repose and allow access by foot.

4.0 HERBICIDAL TREATMENT

Japanese Knotweed will be left in situ in several areas around the site boundary. A root barrier will be installed in these areas to protect the site from lateral regrowth towards the proposed new buildings. A standard programme for knotweed species consists of a 3 year herbicide management plan over the 2022, 2023 and 2024 growing seasons. As discussed, this treatment stunts the lateral growth of the rhizome (root) systems, consequently containing the infestation and preventing the further spread of the species. We apply a non-residual herbicide (Glyphosate) that is safe to use near watercourses, trees, shrubs and bushes. Ebsford will make any necessary applications to the EA, for example for the use of herbicides in close proximity to a watercourse or waterbody. An overview of the recommendations and methodology is as follows:

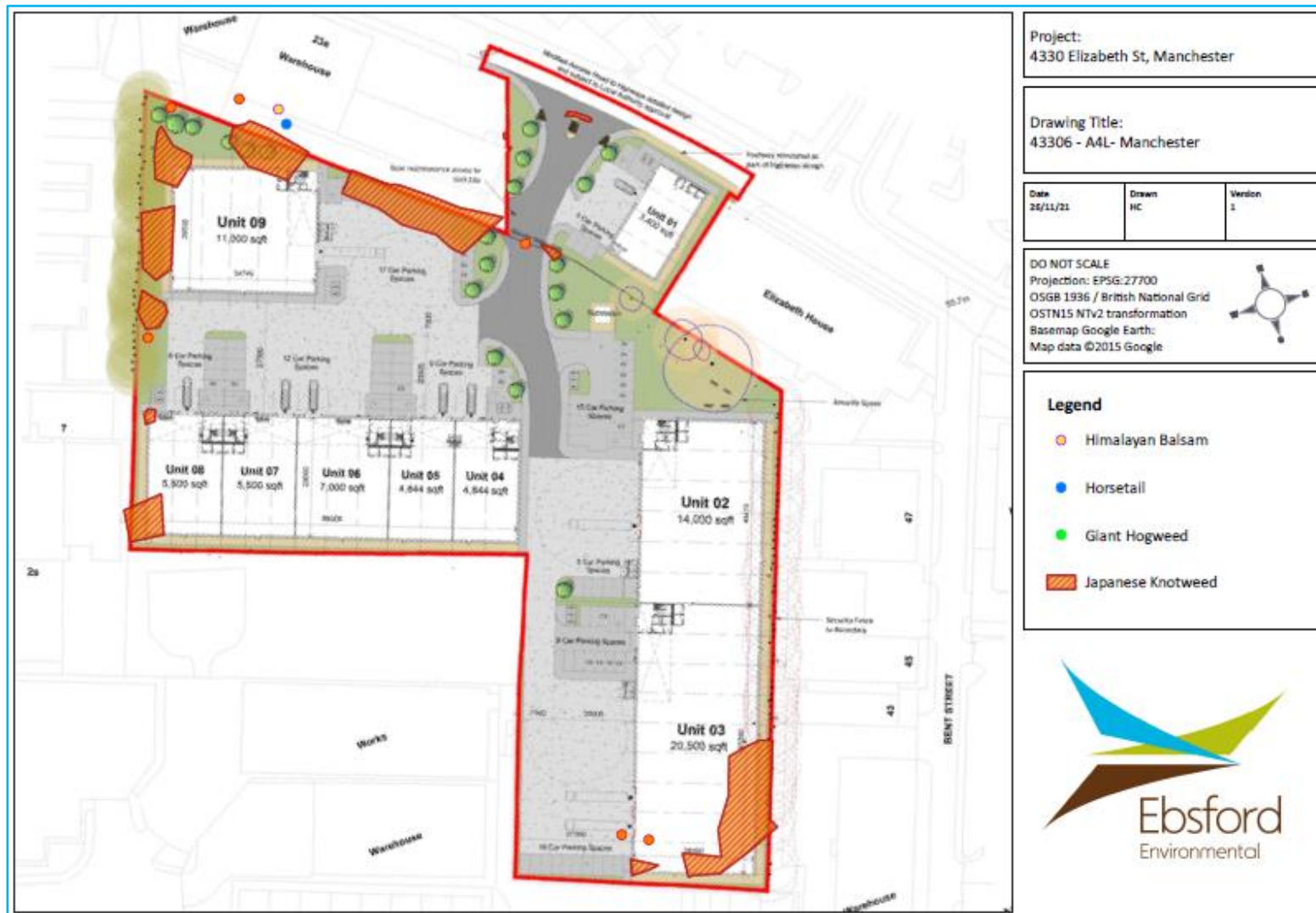
Year	Action
July/Aug - Nov 2022	Ebsford team to attend site and: Conduct herbicidal treatment of any knotweed that is of a height where treatment will be effective Clear any dead canes to promote further growth into 2023
June – Nov 2023	Treatment of JK (3 visits per year)
June – Nov 2024	Treatment of JK (3 visits per year)

Ebsford would recommend a three year herbicidal management plan for the Japanese knotweed over the 2022, 2023 and 2024 growing seasons. This would be the most cost effective solution if the ground is not to be broken during future developments. I would stress that herbicide treatment alone is not usually a feasible remediation strategy where the ground in which the Knotweed resides is due to be mechanically disturbed to facilitate development. Herbicide application alone can ultimately render the plant unable to produce new growth (deemed as eradication), but it is unlikely to remove viability from 100% of the underground rhizome system. The rhizome system can extend to a depth of 3 metres or more but on average it usually extends to 1.5 metres. Herbicides are applied to the leaves and stems and need to translocate down through the root system that is the energy source of the plant. It is unlikely that the rhizomes will be eradicated at depth but there may not be enough energy in the rhizomes to sustain growth unless mechanically disturbed.

A GIS map of the identified infestation has been produced and these areas will be treated over the 3 year period; any other instances of Knotweed growth within the identified areas will also be treated. Upon completion of works, a 10 year warranty will be issued. Monitoring visits will also take place for the duration of the warranty.

Ebsford operatives hold relevant qualifications of competence required for the application of herbicides, namely the relevant NPTC PA1 and PA6 certificates, and best practice is always adhered to in chemical dilution, always following chemical product labels. Herbicides are administered via foliar application with knapsack sprayers. Ebsford conduct herbicide applications in line with best practice as per the INNSA Code of Practice, which stipulates strict guidelines for its' members to follow, for example the effect on the surrounding environment is minimised by using only the necessary quantity of herbicide, recommended dosage rates are always followed. Safety and control measures are followed closely on all visits, such as the use of Personal Protective Equipment, namely a spray suit, gloves and face shield. Knapsacks are filled inside the Ebsford vehicle using a drip tray to avoid spillages. In order to protect the environment as far as possible when applying herbicides, only the target species' foliage is sprayed, taking care to ensure drift of the herbicide is kept to a minimum. Ebsford are highly diligent in health and safety procedures, ensuring risks to operatives as well as the public and the environment are minimised throughout all herbicidal application works.

SITE SURVEY DRAWINGS



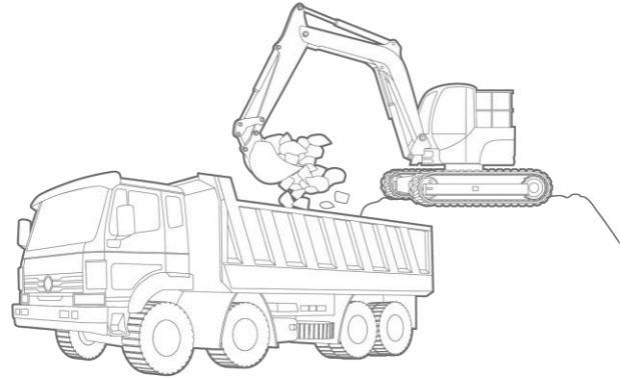
SYSTEM OVERVIEW

Off-site disposal Overview

Off-site disposal offers the most robust and immediate system for the total eradication

of Japanese knotweed (JK) within development sites.

The JK is excavated under supervision in order to identify the contaminated areas and reduce disposal volumes. Contaminated material is then loaded into covered wagons and disposed of to a licensed facility that can accept JK material under the Ebsford Environmental waste carriers license (WCN).



As JK rhizome can extend 3m vertically, excavations require making safe, and in most instances, material will be required either externally or using suitable site won product in order to backfill the removal areas.

Typically waste produced under this system is classified as controlled non-hazardous with incidental JK, (<5%) however other contaminants and soil types can impact the disposal cost.

SYSTEM FEATURES AND CONSTRAINTS

FEATURES

- Immediate solution
- Removes the issue in its entirety
- Gives full peace of mind to potential purchasers of residential development plots
- Effective project management can reduce quantities up to 50% of EA guideline rates

CONSTRAINTS

- The most expensive solution for JK eradication
- Requires deep excavations and backfill
- Difficult to accurately assess volumes so large contingent sums can be required
- Detailed SI/GI and soil analysis required prior to accurate disposal costs being allocated

WARRANTY INFORMATION

This statement has been created in order to clarify the current position at Ebsford regarding the warranty products we offer on projects where we have been commissioned to undertake the treatment of Japanese knotweed.

STANDARD EBSFORD 10 YEAR WARRANTY:

This warranty is our standard warranty which is provided alongside the majority of the projects we undertake. It is provided via our Public Indemnity insurance and the exact wording of the statement from our broker is that:

“The intention of this policy is that it responds to claims against the insured for losses arising from their negligence in advising on Japanese knotweed and the project management of it’s removal by the company and third party contractors.”

This is simplistic and straightforward – if Japanese Knotweed comes back as a result of our negligence the insurance covers the treatment works. This is for each and every project rather than as a collective over the duration of the policy and includes two monitoring visits to the treatment site per year for the duration of cover. Extended cover can be added to this policy with a fee per year dependent upon the works undertaken. This policy is renewed each year at the end of September. We are often asked “what if you are not around to pay the premium next year” and the truth is the same as any other PI insurance – it ceases to exist.

EXTERNAL IBG WARRANTY:

This type of warranty is site specific and provided on the basis of the insurer assessing the risk to them dependent upon the work we have undertaken. This is a one off payment which gives protection for the client regardless of whether Ebsford Environmental exists or not. These products can be provided by our insurance provider or through our membership of either the Property Care Association (<http://www.property-care.org/skill/invasive-weed-control/>) or Invasive Non Native Specialist Association(<http://www.innsa.org/>)

Ebsford are not licensed by the FCA to give specific advice on each insurance policy as this can only be done by the insurance provider. We have summarised the main points of each policy below to assist with deciding which product to follow up.

INNSA IBG: This is issued by EVO, the main benefit of this warranty is that it covers the whole site for treatment of regrowth and is based on a like for like solution. The level of claim is only valid up to the contract value, this can be increased if required at an additional premium.

PCA Warranty: This is offered by GPI through our PCA membership. It is issued against individual plots and would be supplied directly to the potential purchasers. Secondly it covers treatment of knotweed as recommended by a third party contractor who, (in the event of regrowth and Ebsford are unable to honour the terms of the company warranty), would be requested by the insurers to visit site, prepare a methodology and quote. They would then appoint the company and complete works.

TERMS AND CONDITIONS

Interpretation

“Client” means the person named on the proposal document for whom the contractor has agreed to provide the specified service in accordance with these Terms. “Contract” means the contract provision of the specified service. “Contractor” means Ebsford Environmental Ltd. “Specified Service” means the service to be provided by the Contractor for the Client & referred to in the proposal.

Acceptance of Terms & Conditions

The client will be deemed to have accepted these terms & conditions on agreeing the contract, proposal, or any such agreement verbally, in writing or electronically.

The Contractor/Consultant

The Contractor/Consultant agrees to perform the work in a competent manner and in accordance with good practice and known science as applied to arboriculture and ecology, as specified in the proposal document, which forms part of this contract.

Payment

On completion of each stage of the contract an invoice will be submitted for the agreed sum. Unless otherwise agreed in writing, this invoice will fall due for immediate payment with full and final settlement required in 30 days from the date of invoice. Value Added Tax will be charged at the current rate where applicable. Any payments overdue by 60 days may result in suspension of services which would be of serious detriment to any continuous herbicidal treatment programme & an assessment will need to be made as to whether we can commit to the original eradication date. We reserve the right to pass any late payments to a 3rd party debt collection agency where further fees may apply.

Warranties

Where applicable our services are back up by either a 5 year or 10 year warranty issued on completion of the contract. All warranties come in to effect as of the eradication date. We reserve the right to revoke any warranty where the full contract value has not been paid.

Complaints

Any complaints arising from work performed under this contract must be made within 7 days from the date of invoice, unless otherwise agreed in writing.

Disputes

Any disputes arising under these terms & conditions shall be determined by English Law.

Expiry of Quotation

The contractor reserves the right to withdraw and re-price work if the client does not accept the quotation within 30 days of submission, unless otherwise agreed in writing

Cancellation

Any cancellation made outside of 7 days from acceptance of the terms & conditions, but prior to work commencing will be subject to a cancellation fee of 10% of the contract value. Where a contract has commenced & visits undertaken, a cancellation fee of 20% of the remaining contract value staged payments will be charged.

Visit Cancellation

Any cancellation made outside of 7 days from arrangements for access will be subject to a cancellation fee of £250.00 + VAT. Where a contract has commenced & visits are attempted but not possible, a cancellation fee of £500.00 + VAT will be charged.

Completion of Contract

Completion of contract is dependent on weather conditions. Work operations delayed by poor weather will be resumed as soon as conditions allow. Any addition expense incurred by the contractor for changes to the site conditions outside of our control will be charged at our cost price plus 15%. Details of such costs will be submitted in writing prior to work commencing. Any cancellation forced by these additional costs will be subject to the charges detailed in the “Cancellation” section of this document.

Forces Majeure

The contractor will not be liable in damages or otherwise for non-performance of contract because of adverse weather conditions, strikes, lockouts, war and civil commotion, or lack of adequately skilled labour due to causes beyond our control. Further, the contractor retains the right in such circumstances to cancel the Contract in whole or in part. Completion dates shall be contingent upon weather conditions.

Insurance Cover

The contractor will maintain a level of £5,000,000 Third Party and Public Liability Insurance & £10,000,000 Employers Liability Insurance throughout the contract period for any damages to persons or property resulting from the implementation of this contract.

Data Protection Act

The client's details will be held on the contractor's computer database. The information will not be made available to external companies.

Tree Preservation Orders & Conservations Areas

Any trees in close proximity to treatment areas on under this contract may be subject to a Tree Preservation Order or in a Conservation Area. It shall be the client's responsibility to notify Ebsford Environmental Ltd.

Private Covenants

Investigation of Private Covenants shall be the responsibility of the client and no liability is accepted by the contractor for a breach of any such Covenant.

Site Conditions

The contract price is based on the site conditions, existing at the time of the formation of the contract, remaining unchanged for the duration of the contract.

General

If any provision of these terms is held by any court or other competent authority to be invalid or unenforceable in whole, or in part, the validity of the other provisions of these terms and the remainder of the provision in question shall not be affected. Law shall apply to the contract, and the parties agree to submit to the non-exclusive jurisdiction of the courts.